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THE NECESSITY FOR SAFETY DEVICES

BY HON. J. C. DELANEY,
Chief Factory Inspector of Pennsylvania.

The Department of Factory Inspection, over which I have had the honor to preside, for the past eight years, has taken an advance position on the guarding of dangerous machinery, and other appliances equally dangerous. With this end in view, it has sought legislation that would meet the requirement, but has not obtained all that was sought. It has made a careful investigation of many serious accidents, learned their causes, and also delved into the opinions of the courts respecting accidents.

From time to time the views of this department, covering the subject of accidents, have been given to the public. These views cover a wide field, and I shall confine my remarks to a few features in the field of accidents. It has been estimated that more lives are lost and more serious wounds are inflicted each year in the United States, by machinery, than the total of killed and wounded in the battle of Gettysburg. In this estimate, accidents on railroads and steam boats are excluded. I believe the estimate is too low, rather than too high. But whether one or the other, we do know that the casualties from machinery are not creditable to an age so far advanced in philanthropy, the arts and sciences. All these killings and maimings are called accidents. But as an accident is something out of the range of ordinary forethought, the term accident is, I think, often misapplied.

These so-called accidents are the result of three causes, viz.: carelessness on the part of the injured; carelessness on the part of a fellow-employee; and carelessness on the part of the employer. The first two of these causes may be dismissed for the present as coming incidentally within the scope of this subject.

I wish to deal with the owner of the machine, with the person who puts in motion a dangerous mechanism, trusting to the skill and caution of his employee to ward off death or other injury. I find three classes of employers, as well as three main causes for accidents.

First, the employing class that is humane and intelligent.

Second, the class that is humane, but ignorant.

Third, the class that, whether enlightened or not, is wholly indifferent.

The employers in the first of these classes suffer from the weaknesses of the two latter classes, because, in the general clamor against accidents, the public draws no distinction.

In any effort to prevent accidents from machinery, the first class of employers needs little, if any aid or encouragement. Employers of that stamp are ever alert to obtain the newest and best safety appliances, and they know the useful from the useless. The second class of employers would not hesitate to carry out the humane act of installing safety appliances, but are restrained by the fact that they know but very little about the construction of the very machines that are amassing them fortunes. The third class of employers consider their employees as tools of trade, to be left to their own devices, and their own sense of caution. To all such, a dead man, more or less, does not count. A new employee can be had cheaper than a safety appliance.

I have made these distinctions because I wish to be just to all classes, and just to the public as well. And furthermore, it is necessary that such distinctions in classes of employers should be recognized before we can hope to prevent accidents from machinery, or to reduce the number to a minimum.

To prevent an accident is better than to suffer from it in pain or loss of money. But how prevent? In reply to this query, I would suggest that all parts of machinery, including shafting be equipped with oil cups that feed automatically, and that these cups be filled before the engine is started, and at such other time when the machinery is not in motion. Every year I get reports of employees killed, or maimed for life, in the act of oiling overhead shafting in motion. That all exposed cogs, gears and belting should be guarded, is too self-evident. But when cogs and gears are close to the floor, some employers imagine they are not dangerous, ordinarily they are not, but when an employee slips or stumbles upon the floor, the case is otherwise. We have had several shocking accidents from these supposedly harmless cogs and gears. That saws, planers, jointers and shapers can and should be guarded, requires no argument. As a rule, all such dangerous appliances

are guarded but, unfortunately, the guards are so adjusted as to be very inconvenient or annoying to the employee, hence he removes them to his own damage. There should be devices that shall be permanent, whilst at the same time not inconvenient for the operator. It too often happens that employees are caught in machinery or shafting and killed or mangled when, if a ready means had been at hand to stop the machinery, the injury would have been slight. To prevent such accidents, it is only necessary to place an engine check-stop near each machine or at least one in each room. By this means the motive power can be instantly shut off, no matter how far the engine-room may be from the place of the accident. These check-stops, where used have given most satisfactory results.

There should be legislation that will prevent the manufacture or the installation of machinery, and its appliances, that is not equipped with the most modern and best of safety guards. Such legislation is within the police power of the law-makers, and could not be set aside as unconstitutional. It would work a peaceful revolution in the right direction by training employees to the use of guarded machinery. It would greatly lessen the number of accidents, and would save employers from countless suits for damages. As a furtherance to this, the commonwealth should have machinery exhibits at his own expense, exhibits at which all employers could witness the perfection of human skill in the manufacture and application of safety devices.

It may not be amiss to speak of a hope that has lived with me for many years, a hope that if realized will be the means of saving many human lives and millions of dollars worth of property. I have, in mind, the many accidents on railroads, caused by "head end" collisions, "side swipings" of trains while running in opposite or parallel directions. How to prevent such accidents is not the hope I wish to express, but how to prevent the loss of life and property after such collisions. A few years ago a horrible accident occurred within a few miles of our capital city. A passenger train was "side swiped" by a loaded freight train causing the loss of several precious lives and the destruction of hundreds of thousands of dollars worth of property. I was one of the first to arrive on the awful scene, a scene which will ever live in my memory. The hundreds who, like myself, were drawn to that awful holocaust were powerless to succor the unfortunate beings who were pinned under

the mass of wreckage, and who were being roasted to death by the fire raging around them. At that moment I realized that a means for the saving of both life and property, and a very simple one at that, was at hand, provided railroad companies could be made to provide the same, namely, the equipping of every passenger car, every locomotive, and every caboose with a supply of fire extinguishers. I at once conveyed my thought to prominent railroad officials, all of whom thought the suggestion a splendid one and gave me assurance that it would receive prompt attention. After waiting a year, and seeing no result, I conveyed my thoughts to the highest national authorities and they, like my railroad friends, applauded and highly commended the suggestion, but I regret to say no steps have yet been taken to supply the simple preventive. I therefore make an appeal, through this organization, that the good men and women of this nation take up this humane suggestion and secure the simple and inexpensive device I have begged for, but have not received.